

REMARKS

The examiner has maintained the rejection of claim 20 (the only independent claim) under 35 USC 103 as being unpatentable over Takahashi (US 5057943) and Christopher (US 5227617). The examiner is urged to reconsider and withdraw the rejection.

Claim 20 has been amended to make it clearer that the invention contemplates a hand-held device for writing indicia on a medium disconnected from the device. (The amendments are made without prejudice to the original subject matter being pursued in a future continuation application.) The claim now includes two limitations that make that requirement unmistakably clear:

1. "a housing configured to be hand held while disconnected from the medium"
2. " wherein the position and orientation of the position and orientation of the light beam relative to the medium is dependent on the orientation in which the user holds the housing, which is disconnected from the medium".

The examiner had interpreted the claim prior to the amendment as covering a hand-held printer of the type taught in Takahashi -- in other words, a device in which the medium (e.g., light sensitive paper) is held in rollers in precise orientation relative to a scanning light beam. The amendments make it clear that such a structure is outside the claim. What the claim calls for is the altogether different concept of a hand-held device emitting a light beam whose orientation relative to the medium is established by the user's hand.

Takahashi describes an apparatus for taking a signal representing an image (e.g., a photograph) and using it to control a scanning beam to print that image on photo-sensitive paper that is fed through a machine. The patent describes techniques for improving the accuracy of the writing process so that the image can be accurately printed. For example, it indicates that the "recording sheet 1 is pressed by the sub-scanning roller 11 by means of a roller 12 so as to be stably held on the sub-scanning roller 11" (col. 3, lines 59-62). It relies on the beam being detected by small mirror 10 and detector 9 at the end of each scan, to synchronize the frequency of scanning to movement of the paper. The number of scans is counted, and a frequency dividing circuit is used to control a stepping motor 13 that drives the paper (col. 4).

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None of these improvements in accuracy as taught in Takahashi could possibly be implemented were the scanner to be disconnected from the recording paper, and simply held relative to the paper in an orientation established by the user's hand. Thus, no one on reading Takahashi would ever consider modifying Takahashi to put the light beam in a hand-held housing disconnected from the recording paper, as called for by claim 20.

It is, of course, well settled law that a reference may not be modified in ways that defeat the objective taught in the reference. That, of course, is exactly what would happen if Takahashi were modified so that the light beam was hand-held relative to the paper. The accurate renditions of photographs that Takahashi is attempting to achieve would be lost. With the scanner held in the user's hand it would obviously be impossible to synchronize the scanning with movement of the medium on which the scanner is directed.

Thus, the combination suggested by the examiner of Takahashi with Christopher would simply never be even considered by the person of ordinary skill.

Furthermore, Christopher teaches away from using a hand-held scanning beam to write indicia. Christopher uses a scanning beam only for reading indicia from a target (e.g., bar code symbols). Writing is done using a thermal print head (e.g., writing the numerical code read by the scanner from the bar code symbol).

Accordingly, claim 20 is believed to be in condition for allowance.

The remaining claims are all properly dependent on one or more of the independent claims, and thus allowable therewith. Each of the dependent claims adds one or more further limitations that enhance patentability, but those limitations are not presently relied upon. For that reason, and not because applicants agree with the examiner, no rebuttal is offered to the examiner's reasons for rejecting the dependent claims.

Allowance of the application is requested.